We claim:

1.   A method for controlling outer loop power, comprising the following steps of:

a)   measuring a BER, and calculating an error between measured BER and a target BER and a change of the error;

b)   determining a degree of the error and a degree of the change of the error;

c)   calculating a degree of a SNR threshold adjusting step in accordance with the degree of the error and the degree of the change of the error;

d)   determining an actual SNR threshold adjusting step based on the calculated degree of the SNR threshold adjusting step; and

e)   adjusting a SNR threshold in accordance with the actual SNR threshold adjusting step.

2.   The method for controlling outer loop power as claimed in claim 1, wherein said step a) is performed as follows:

the error is –10, when measured BER = 0;

the error is log10 (measured EBR/target BER), when measured BER ≠ 0; and

the change of the error is a current calculated error minus a previous calculated error.

3.   The method for controlling outer loop power as claimed in claim 1, wherein the degree of the error and the degree of the change of the error in said step b) are determined by a table below:

Degree	-3	2	-1	0	1	2	3
Error	<-0.7	[-0.7, -0.3]	[-0.3, -0.05]	[-0.05, -0.05]	[0.05, 0.3]	[0.3, 0.7]	>0.7

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change of error	<-0.7	[-0.7, -0.3]	[-0.3, –0.1]	[-0.1, 0.1]	[0.1, 0.3]	[0.3, 0.7]	>0.7

4. The method for controlling outer loop power as claimed in claim 2, wherein the degree of the error and the degree of the change of the error in said step b) are determined by a table below:

Degree	-3	-2	-1	0	1	2	3
Error	<0.7	[-0.7, -0.3]	[-0.3, -0.05]	[-0.05, -0.05]	[0.05, 0.3]	[0.3, 0.7]	>0.7
change of error	<0,7	[-0.7, –0.3]	[-0.3, –0.1]	[-0.1, 0.1]	[0.1, 0.3]	[0.3, 0.7]	>0.7

5. The method for controlling outer loop power as claimed in claim 1, wherein said step c) is performed in accordance with the following equations;

if $|$error degree$|$ <2, SNR threshold adjusting step degree = int(a_1* error degree + (1 - a_1) * error change degree); and

if $|$error degree$|$ ≥2, SNR threshold adjusting step degree = int(a_2 * error degree +(1 - a_2) * error change degree),

wherein, int(x) denotes rounding, and both a_1 and a_2 are adjustable coefficients and meet the following requirement:

0≤ a_1 ≤ a_2 ≤1.

6. The method for controlling outer loop power as claimed in claim 3, wherein said step c) is performed in accordance with the following equations:

if $|$ error degree $|$ <2, SNR threshold adjusting step degree = int(a_1 * error degree +(1 - a_1) * error change degree); and

if | error degree | ≥2, SNR threshold adjusting step degree =int(a_2 *
error degree +(1 - a_2) * error change degree),

wherein, int(x) denotes rounding, and both a_1 and a_2 are adjustable
coefficients and meet the following requirement:

10      $0 \leq a_1 \leq a_2 \leq 1$.

7.   The method for controlling outer loop power as claimed in claim
4, wherein said step c) is performed in accordance with the following
equations:

if | error degree | <2, SNR threshold adjusting step degree = int(a_1
5   *error degree +(1 - a_1) * error change degree); and

if | error degree | ≥2, SNR threshold adjusting step degree =int(a_2 *
error degree +(1- a_2) * error change degree),

wherein, int(x) denotes rounding, and both a_1 and a_2 are adjustable
coefficients and meet the following requirement:

10      $0 \leq a_1 \leq a_2 \leq 1$.

8.   The method for controlling outer loop power as claimed in claim
5, wherein a_1 is 0.5 and a_2 is 0.7.

9.   The method for controlling outer loop power as claimed in claim
6, wherein a_1 is 0.5 and a_2 is 0.7.

10.   The method for controlling outer loop power as claimed in claim
7, wherein a_1 is 0.5 and a_2 is 0.7.

11. The method for controlling outer loop power as claimed in claim 1, wherein in step d), the actual SNR adjusting step threshold is determined according to the degree of SNR threshold adjusting step as shown in the following table:

degree of SNR threshold adjusting step	-3	-2	-1	0	1	2	3
actual SNR threshold adjusting step	-0.6	-0.3	-0.1	0	0.1	0.3	0.6

12. The method for controlling outer loop power as claimed in claim 5, wherein in step d), the actual SNR adjusting step threshold is determined according to the degree of SNR threshold adjusting step as shown in the following table:

degree of SNR threshold adjusting step	-3	-2	-1	0	1	2	3
actual SNR threshold adjusting step	-0.6	-0.3	-0.1	0	0.1	0.3	0.6

13. The method for controlling outer loop power as claimed in claim 6, wherein in step d), the actual SNR adjusting step threshold is determined according to the degree of SNR threshold adjusting step as shown in the following table:

degree of SNR threshold adjusting step	-3	-2	-1	0	1	2	3
actual SNR threshold adjusting step	-0.6	-0.3	-0.1	0	0.1	0.3	0.6

14.   The method for controlling outer loop power as claimed in claim 7, wherein in step d), the actual SNR adjusting step threshold is determined according to the degree of SNR threshold adjusting step as shown in the following table:

degree of SNR threshold adjusting step	-3	-2	-1	0	1	2	3
actual SNR threshold adjusting step	-0.6	-0.3	-0.1	0	0.1	0.3	0.6

15.   The method for controlling outer loop power as claimed in claim 1, wherein in step e), the SNR threshold is adjusted by the following steps of:

i)   calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step + previous SNR threshold; and

ii)   determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.

16.   The method for controlling outer loop power as claimed in claim 11, wherein in step e), the SNR threshold is adjusted by the following steps of:

i)   calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step + previous SNR threshold; and

ii)   determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.

17.   The method for controlling outer loop power as claimed in claim 12, wherein in step e), the SNR threshold is adjusted by the following steps of:

i)   calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step + previous SNR threshold; and

ii)   determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.

18. The method for controlling outer loop power as claimed in claim 13, wherein in step e), the SNR threshold is adjusted by the following steps of:

i) calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step + previous SNR threshold; and

ii) determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.

19. The method for controlling outer loop power as claimed in claim 14, wherein in step e), the SNR threshold is adjusted by the following steps of:

i) calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step + previous SNR threshold; and

ii)   determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.